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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/715,723 | 11/14/2003 | Osamu Yamamoto | 1232-5206 | 5007 |
| 27123 | 7590 | 09/08/2005 | EXAMINER | |
| MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101 | | | WEBB, CHRISTOPHER G | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2878 | |
| DATE MAILED: 09/08/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/715,723 | YAMAMOTO, OSAMU | |
| | Examiner Christopher G. Webb | Art Unit 2878 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-6 is/are rejected.
 7) Claim(s) 7 and 8 is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 14 Nov. 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20041122</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grim (US 4,092,544, hereafter Grim).

With respect to claim 1, Grim teaches an X-ray imaging apparatus comprising: a sensor for converting radiation into an electric signal (fig. 3, element 22); an electronic cassette (fig. 4, element 4); an extension to the electronic cassette (fig. 3, element 5) for accommodating said sensor; a first cable connected to a side surface of said cassette extension (fig. 3, element 23); and a first connector provided at an end of said first cable (fig. 3, element 24a). Grim does not teach that the cassette is for the accommodation of said sensor, but it would have been obvious at the time of invention to one of ordinary skill in the art to unify the cassette and the cassette extension, thus creating a single unit that is the cassette for accommodating said sensor. This would allow for greater ease in the event that the cassette needed to be transported, and it would reduce the chances that the sensor would become abnormally displaced from the cassette and interfere with the operation of the apparatus.

As to claim 3, Grim does not disclose a specific length of the cable. However, as the cable is shown and described as connecting to the emitter, it would be obvious to one of ordinary skill in the art at the time of invention that the cable meets the length requirements specified by the applicant.

Claims 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grim as applied to claim 1 above, and further in view of McEvoy et al. (US 5,844,961, hereafter McEvoy).

As to claim 2, Grim teaches an X-ray imaging apparatus comprising: a sensor for converting radiation into an electric signal (fig. 3, element 22); an electronic cassette (fig. 4, element 4); an extension to the electronic cassette (fig. 3, element 5) for accommodating said sensor; a first cable connected to a side surface of said cassette extension (fig. 3, element 23); and a first connector provided at an end of said first cable (fig. 3, element 24a). Grim also teaches a second connector (fig. 3, element 24b) to be connected to said first connector. Grim does not teach a second cable connected to the second connector or an external apparatus connected to said second cable for transmitting/receiving an electric signal to/from said electronic cassette and/or supplying electric power to said cassette via said first and second cables. McEvoy teaches a second connector also (fig. 13, element 1320), as well as a second cable (fig. 13, element 210) and an external apparatus (fig. 13, element 1350) for performing such functions. It would have been obvious at the time of invention to one of ordinary skill in the art to replace the connector of Grim with the connector, cable, and external

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apparatus taught by McEvoy. This would allow for the quick connection of hardware that could perform various functions for interacting with the cassette.

As to claim 4, Grim does not disclose a connection control unit that generates signals indicative of connection and disconnection. McEvoy teaches a digital cassette that has status indicators (fig. 15, element 310). Although he does not disclose the control unit specified, it would be obvious that an indication of status needs a signal to carry that information, and that the information could be related to the allowance or disallowance of disconnection. It would have been obvious at the time of invention to one of ordinary skill in the art to include the status indicators of McEvoy in the apparatus of Grim. Indicating the status of the connection state would prevent the cassette from being removed at an improper or inopportune time.

As to claim 5, McEvoy teaches the use of light emitting indicators as noted above with respect to claim 4.

As to claim 6, Grim does not teach the use of a wireless communication unit capable of communicating with said external apparatus being connected to said first connector. McEvoy teaches that a wireless Ethernet card (fig. 15, element 1550) may be connected to the cassette. It would have been obvious at the time of invention to one of ordinary skill in the art to provide a wireless connection like the one of McEvoy and connect it to said first connector, designated in McEvoy's fig. 13 as connecting to the communications link. This would allow freedom from the physical limitation imposed by wired data transmission and would prevent signal interruption due to cable failure.

Allowable Subject Matter

Claims 7 and 8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Although McEvoy teaches the use of a battery (col. 10, lines 59-61), it is not disclosed as being controlled by a control unit.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,493,600 and US 6,533,453 B1 disclose related prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Webb whose telephone number is (571) 272-8449. The examiner can normally be reached on 9AM - 5:30PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CGW



DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800